

INFLUENCE OF ACCELERATED AGEING PROCESS
ON THE PROTECTIVE PROPERTIES
AND WEAR PARAMETERS OF NEWLY DEVELOPED
TEXTILE UV BARRIER MATERIALS

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ABSTRACT *Functionalisation of textiles by nanotechnology methods, especially by introduction to textile substrate or onto its surface functional nanoparticles, constitutes one of the priorities in the development of textile material engineering. It allows to achieve textiles characterised with properties which are not attainable by means of conventional methods. In the area of textiles functionalisation the following research works (among others) are carried out: imparting new properties to textiles, including imparting multi-functional properties, e.g. antibacterial properties, UV absorbing, photo-catalytic and deodorising properties.*

In this paper, the results of tests on UV barrier and wear properties for textile materials modified according to innovative method and intended for covers of museum and book collections, were shown. Such materials were obtained by the incorporation of newly developed modifiers based on micronised metal oxides (TiO₂, ZnO) into the textiles made of polyester fibres. Moreover the influence of accelerated ageing tests on the UV barrier and wear properties was discussed as well. This publication was prepared within the key project – POIG no. 01.03.01-00-006/08 co-financed from the funds of European Regional Development Fund within the framework of the Operational Programme Innovative Economy.

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